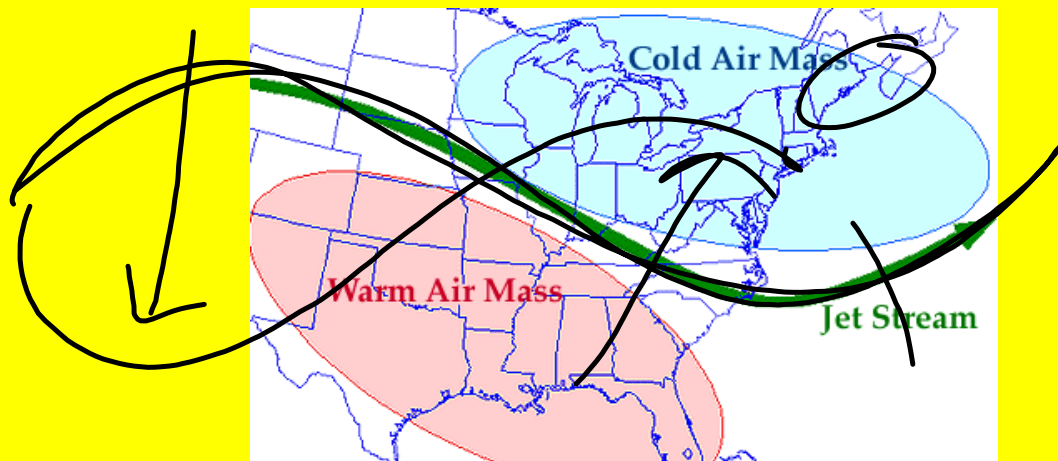


Jet Stream

- like a river of air
- forms between 7 and 13 km above earth in the atmosphere
- formed where a cold and warm air mass meet
- changes daily, weather patterns follow



California

<http://www.youtube.com/watch?v=CgMWwx7ClI4>




Warm and Cold Fronts

- a warm front is the leading edge of a large body of warm air
- a cold front is the leading edge of a large body of cold air

 <http://www.youtube.com/watch?v=huKYKykjem0>

Humidity

- measured as a percentage
- the amount of water vapour in the air
- air holds different amounts at different temperatures

 <http://www.youtube.com/watch?v=7GS5jl4nLek>

- humidex - combination of temperature and the amount of moisture in the air
- a high value prevents sweat from evaporating from your body

Formula

Humidex = (air temperature) + h

$h = (0.5555) * (e - 10.0);$

$e = 6.11 * \exp(5417.7530 * ((1/273.16) - (1/\text{dewpoint})))$

 <http://www.csgnetwork.com/canhumidexcalc.html>

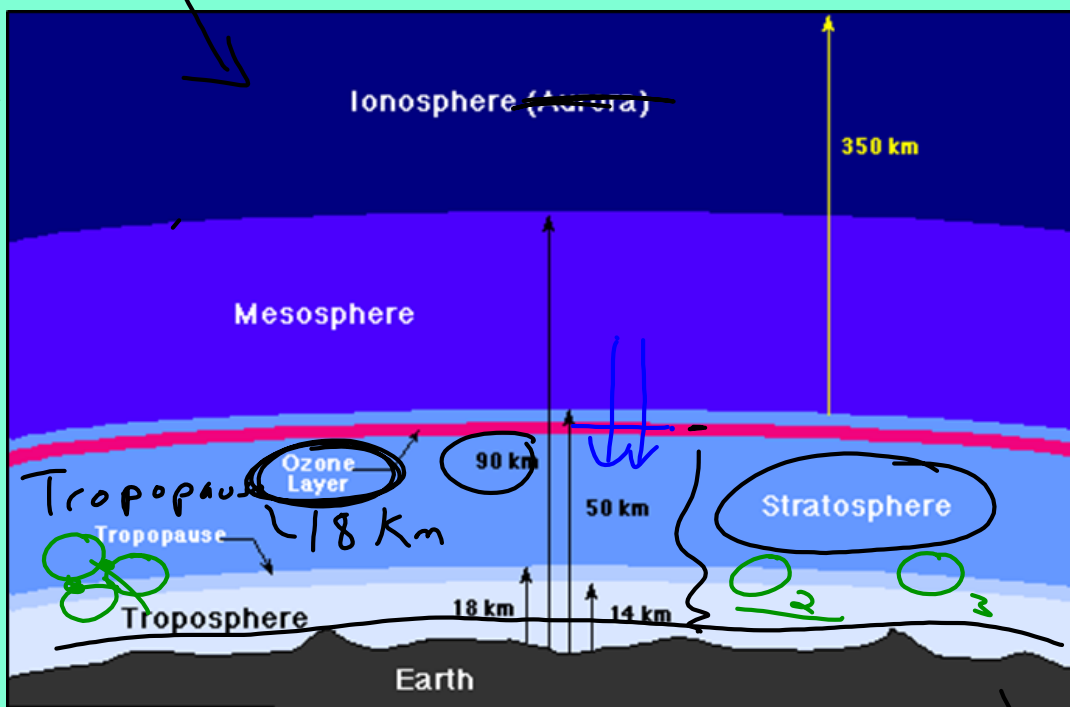
Barometric or Atmospheric Pressure

- the pressure air exerts on the earth's surface
- high atmospheric pressure usually indicates fair weather

the atmosphere consists of 6 layers

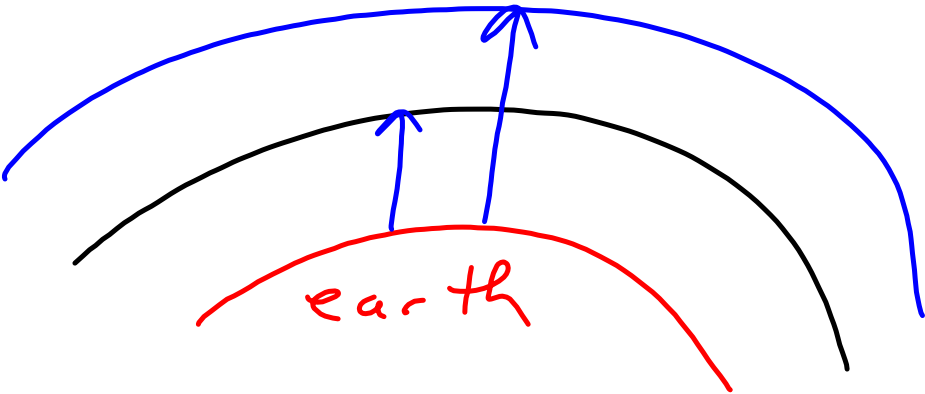
Sketch the diagram below

Exosphere (space)



Troposphere - 14 km Stratosphere
50 km

- the troposphere contains most of the atmosphere moisture and has the greatest impact on weather

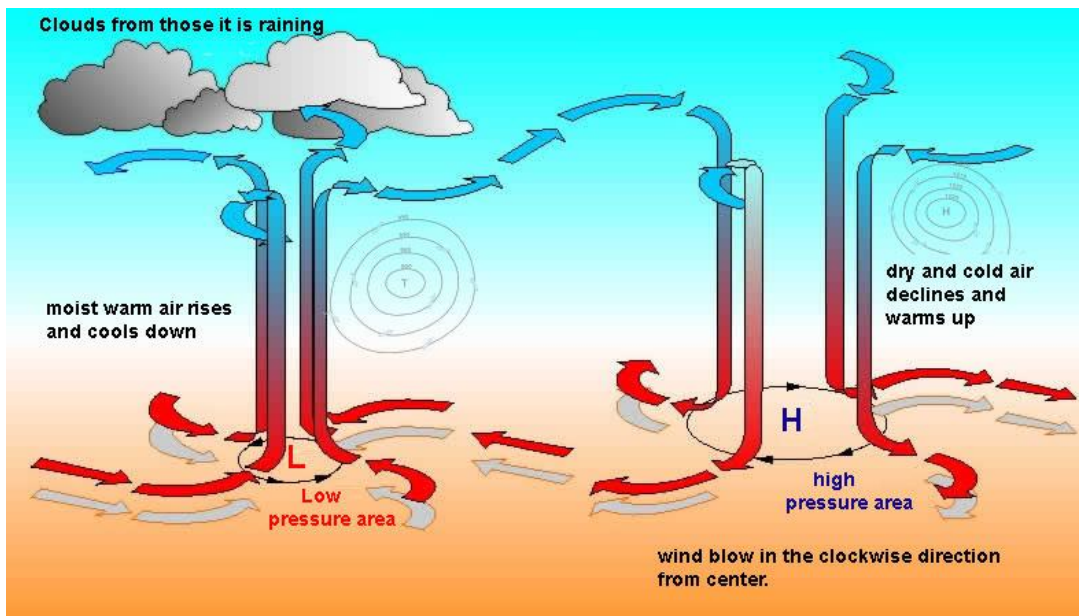


A high pressure system

is a whirling mass of cool, dry air that generally brings fair weather and light winds. When viewed from above, winds spiral out of a high-pressure center in a clockwise rotation in the Northern Hemisphere. These bring sunny skies.


A low pressure system

is a whirling mass of warm, moist air that generally brings stormy weather with strong winds. When viewed from above, winds spiral into a low-pressure center in a counterclockwise rotation in the Northern Hemisphere.



Wind Chill

- removal of heat from ones body.
- Combination of temperature and wind

 <http://www.ec.gc.ca/meteo-weather/default.asp?lang=En&n=0F42F92D-1>

U.V. Index

- the level of UV rays (or ultraviolet radiation) that reach the surface. UV rays are those sun rays that can cause sunburns.

Long-term exposure to UV rays has also been associated with skin cancer and cataracts.

Probability of precipitation Likelihood of precipitation

- (POP, LOP) is the chance that measurable precipitation will fall during the forecast period.

For example, a 30% probability of precipitation means that the chance of you getting rained over (or snowed over in winter) is 3 in 10. In other words, there is a 30% chance that rain or snow will fall on you, and, therefore, a 70% chance that it won't.